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Notice of Allowability	Application No.	Applicant(s)	
	09/681,185	CONNER, ARLIE R.	
	Examiner	Art Unit	
	Leo Boutsikaris	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 3/3/03.
2. ☒ The allowed claim(s) is/are 1,4-20,22-24.
3. ☒ The drawings filed on 14 February 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>3/3/03</u> 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
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DETAILED ACTION

Allowable Subject Matter

Claims are 1, 4-20, 22-24 are allowed.

Claims 1, 4-20, 22-24 are allowable over the prior art of record for at least the reason that even though the prior art discloses color display systems, wherein a holographic layer positioned before the liquid crystal display pixels is used to converge the various incident color lights onto the pixels such that light output from the pixels is widely diverging, the prior art fails to teach or reasonably suggest, regarding claims 1, 4-11, a color display optical system comprising a holographic grating positioned between the refractive lens and the imaging device to align the color components of light along paths that are normal to the plane of the imaging device, regarding claims 12-19, a color display optical system comprising a diffractive color dispersing layer positioned between the focusing element and the imaging plane to align the color components of light along paths that are normal to the imaging plane at the pixel structures, and regarding claims 20, 22-24, a telecentric color filtering method for providing telecentric color-filtered light to an imaging plane of an electronic imaging device comprising directing the plural diverging color light components through the holographic grating so that all the color light components are normal to the imaging plane, as set forth by the claimed combination.

In the color display system of Nakanishi (US 5,760,850, Fig. 6), the holographic layers that produce non-converging light normal to the pixel plane are positioned after the LCD.

Ichikawa (US 5,506,701, Fig. 3) discloses a color display system, wherein a holographic layer 50

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disposed before the LCD pixels converges the color lights so that at the output of the pixels the light is widely diverging. Tanaka (US 5,633,737, Fig. 2) and Joubert (US 6,426,810, Fig. 2a) disclose a color display system, wherein a set of dichroic mirrors is used to separate light into the different colors, and a pair of refractive microlens arrays 5 and 6 and MLC, respectively, is used to converge the color lights onto the LCD pixels. Ori (US 6,359,719, Fig. 1) discloses a color display system, wherein a diffractive layer D1, positioned after a refractive microlens array 1, is used to separate the light into colors and direct the color components onto the LCD pixels. Finally, Suzuki (US 6,141,124, Fig. 1) discloses a color display system, wherein a set of holographic layers is used to create and converge color components onto the set of pixels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-2308.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo Boutsikaris, Ph.D., J.D.
Primary Patent Examiner, AU 2872
May 23, 2005



LEONIDAS BOUTSIKARIS
PRIMARY EXAMINER